

52



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,440	12/11/2001	Michael J. Homberg	C0012/7011	5250

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EXAMINER

TORRES, JOSEPH D

ART UNIT PAPER NUMBER

2133

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

52

**Office Action Summary**

Application No.

10/016,440

Applicant(s)

HOMBERG ET AL.

Examiner

Joseph D. Torres

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-15,20-29 and 32-43 is/are rejected.
- 7) ☒ Claim(s) 2,3,16-19,30 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. In view of the Applicant's amendment filed 08/09/2004, the Examiner withdraws all objections to the drawings in the previous Office Action.

### ***Claim Objections***

2. In view of the Applicant's amendment filed 08/09/2004, the Examiner withdraws all objections to the claims in the previous Office Action.

### ***Claim Rejections - 35 USC § 112***

3. In view of the Applicant's amendment filed 08/09/2004, the Examiner withdraws all 35 USC § 112 rejection to the claims in the previous Office Action.

### ***Response to Arguments***

4. Applicant's arguments filed 08/09/2004 have been fully considered but they are not persuasive.

The Applicant contends, "Thus, the invention is addressed to a completely different problem than the Sturza system. In Sturza, the data is not reformatted, and, thus, the input data block and the output data blocks are the same size and comprise the same data."

Art Unit: 2133

In response to applicant's arguments, the recitation "the incoming data reformatted into egress data blocks with sizes different from the ingress data blocks and egress headers" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The Applicant contends, "The examiner apparently claims that the Inner Decoder 87 "generates" a code check because the outer encoded payload will include a code check, mainly because the code check was included in the "data" before the inner decoding was performed".

The Examiner asserts that one of ordinary skill in the art at the time the invention was made would have known that a step for decoding a systematic code requires that a new code check be generated to be compared with the received code check. Hence, Decoder 87 "generates" a new code check to be compared with the received code check.

The Applicant contends, "In Sturza, the data block and header are combined by the header and payload interleaver before the inner encoding takes place rather than after as recited in claim 1.

The Examiner disagrees and asserts that claim 1 does not recite "after anywhere in the claim language.

The Applicant contends, "The examiner states that Sturza discloses interleaving and that is equivalent to the recited modification. However, interleaving is a well-known process in which the order of data words in a data block is systematically changed in order to distribute burst errors."

The Examiner disagrees and asserts that Figure 6 in Sturza teaches Interleavers for the ingress data block.

The Applicant contends, "The examiner states that Sturza discloses interleaving and that is equivalent to the recited modification. However, interleaving is a well-known process in which the order of data words in a data block is systematically changed in order to distribute burst errors."

The Examiner disagrees and asserts that Reed-Solomon codes are generated using Linear Feedback Shift Registers, which is a rotating means for cyclic codes, i.e., the very generation of a cyclic code is rotating means.

The Applicant contends, "Claim 15 recites limitations parallel to those recited in claim 1.

The examiner claims that the Sturza Inner Decoder 87 corresponds to the recited ingress encoder. As stated above the Inner Decoder 87 performs a decoding step not an encoding step as performed by the ingress encoder and recited in claim 1. The examiner claims that re- encoding is a process that must be preformed by decoders. However, this assertion is now where taught or suggested by Sturza. The examiner is requested to provide support for this assertion if he intends to maintain it."

At the Applicants request, the Examiner presents Wicker (Stephen B. Wicker, "Error Control Systems for Digital Communication and Storage", Prentice-Hall, 1995). In particular, page 117 of Wicker teaches a standard decoding algorithm for systematic cyclic codes whereby a second code check d" must be generated to be compared to the received code check d'.

The Applicant contends, "The examiner further asserts that the egress encoder recited in claim 15 corresponds to the Header Outer Encoder 85 of Sturza. However, the recited egress encoder generates a code check from the egress header and the ingress code check. The Sturza Header Outer Encoder generates a code check from the header information only, because the code check information has already been removed by the Header Outer Decoder 91. Thus, the Header Outer Encoder of Sturza does not correspond to the recited element."

The Examiner disagrees and asserts that claim 15 does not recite "egress encoder generates a code check from the egress header and the ingress code check" but

instead explicitly recites, "an egress data block derived from the ingress data block and from the ingress code check", hence claim 15 only states that "an egress data block" is derived from "the ingress data block and from the ingress code check".

The Examiner disagrees with the applicant and maintains all rejections of claims 1, 4-15, 20-29 and 32-43. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that claims 1, 4-15, 20-29 and 32-43 are not patentably distinct or non-obvious over the prior art of record in view of the reference, Sturza; Mark A. et al. (US 6157642 A, hereafter referred to as Sturza) as applied in the last office action, filed 05/06/2004. Therefore, the rejection is maintained.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1, 4-15, 20-29 and 32-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sturza; Mark A. et al. (US 6157642 A, hereafter referred to as Sturza).

See the Non-Final Action filed 05/06/2004 for detailed action of prior rejections.

***Allowable Subject Matter***

6. Claims 2, 3, 16-19, 30 and 31 are objected to as being dependent upon respective rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of respective base claims and any intervening claims.

See the Non-Final Action filed 05/06/2004 for detailed action of prior rejections.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

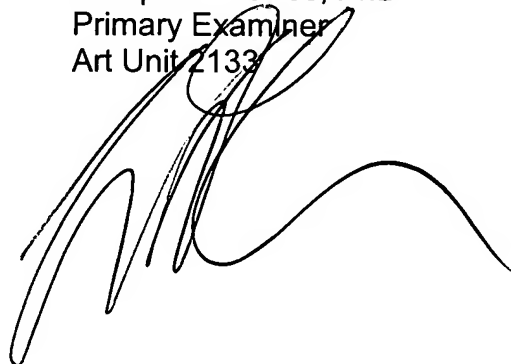


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph D. Torres, PhD  
Primary Examiner  
Art Unit 2133

A handwritten signature in black ink, appearing to be 'J. D. Torres', written over the printed name and title.